

11/08/2008 2:17:31 PM
Jean-Luc Menard

Process Sheet

CU-DAR001 Dart Helicopters Services
41119
13546
11/08/2008 S.O. No. :
NC
Type : MACHINED PARTS
Previous Run :
Written By :
Checked & Approved By :
Comment : Est Rev:A New Issue 08-07-31 JLM Verified By:DD

Drawing Name : SEAT RAIL
Part Number : D38111
Drawing Number : D3811 PREL Rev.A
Project Number : N/A
Drawing Revision : PREL Rev.A
Material :
Due Date : 18/08/2008
Qty: 3 Um: Each

008.10.07

POSITIVE
RECALL

Additional Product

PRELIMINARY ISSUE

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M6061T6B1500X02500 6061-T6 Bar 1.50 x 2.50



Comment: Qty.: 2.1000 f(s)/Unit Total : 6.3000 f(s)
6061-T6 Bar 2.500x 1.50
Batch: 1107387

8.5 08/08/14

2.0 BAND SAW BAND SAW



Comment: BAND SAW
Cut blank 23.250 " long

8.5 08/08/14

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1- Mill as per Folio FA776Rev. AA & Dwg D3811 Rev. PREL
2-Deburr per dwg D3808

ATO

8.5 08/08/14 (3)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

8.5 08/08/14 (3)

5.0 MILLING CONV. CONVENTIONAL MILLING MACHINE



Comment: CONVENTIONAL MILLING MACHINE
1-DRILL REMAINIG HOLES

8.5 08/08/14 (3)

PRELIMINARY ISSUE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3811-1 PAR #: N/A Fault Category: Prod Eng. Coordinator NCR: Yes No DQA: D Date: 08/10/10
D3811-041 DSI 9419-011 D350-689 QA: N/C Closed: D Date: 08/10/10

NCR: 41119		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/08/14	3.0	Error in program for 30° chamfer. RC Program Error → program fixed.	[Signature]	- Scrap & replace Qty 2 in 107387	[Signature] 08/08/14	[Signature] 08/10/07	[Signature]	[Signature]
08/08/15	3.0	Dimensions between holes off. Programming error. Prog. Fixed	[Signature]	- fix program in black revised to wro.	[Signature] 08/08/15	[Signature] 08/10/07	[Signature]	[Signature]

NOTE: Date & initial all entries

1951
OHS 1133

A
i

)

recovered from the left

1951

1951-1952 1953-1954

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SEAT RAIL

Job Number: 41119

Part Number: D38111

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 08/08/15

③

7.0 QC8 SECOND CHECK



Comment: SECOND CHECK

SA 08-08-18

8.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1
Chemical Conversion Coat as per QSI 005 4.1

ENGINEERING
APPROVAL

SA 08.08.20

9.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: GA

SA 08/08/20

①

10.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/10/09 SA

Job Completion



POSITIVE RECALL

EFFECTIVE 08/08/11 AUTH

RELEASED 08.08.20 DATE

APPROVAL
ENGINEERING

DART AEROSPACE LTD		Work Order: 41119
Description: Seat Track		Part Number: D3811-1
Inspection Dwg:	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒

First Article

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Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
22.20	$\pm .030$	22.20	/			
4.440 Pitch	$\pm .010$	4.440	/			
.40	$\pm .030$.402	/			
1.400	$\pm .010$	1.401	/			
10.00	$\pm .030$	10.0005	/			
$\phi .281 \times .440$	$\pm .006$ $\pm .001$	$\phi .281 \times .440$	/			
.590 Pitch	$\pm .010$.590	/			
.780	$\pm .010$.789	/			
.788 pitch	$\pm .010$.788	/			
23.00	$\pm .030$	23.00	/			
$\phi .196$	$\pm .006$ $\pm .001$	$\phi .196$	/			
Cs. $\phi .358 \times 100$	$\pm .006$ $\pm .001$	$\phi .358 \times 100$	/			
1.576		1.577	/			
$\phi .523$	$\pm .006$ $\pm .001$	$\phi .523$	/			Manual Mill
.37	$\pm .030$.370	/			Manual Mill
1.08	$\pm .030$	1.080	/			Manual Mill
.44	$\pm .030$.44	/			
.286 x 60°	$\pm .010$.286 x 60°	/			
20.68	$\pm .030$	20.680	/			Manual Mill
.132	$\pm .010$.130	/			

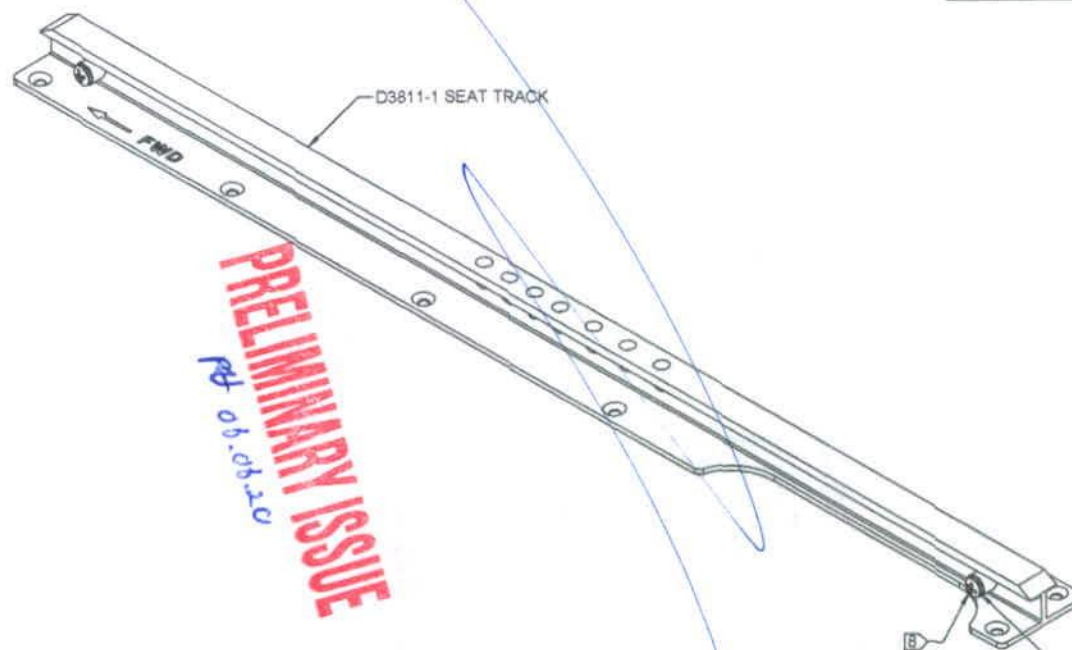
Measured by: SA
Date: 08/06/15

Audited by: [Signature]
Date: 08.08.18

Prototype Approval: [Signature]
Date: 08.08.19

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

QTY -041	P/N	DESCRIPTION
X	D3811-041	SEAT TRACK ASSEMBLY
1	D3811-1	SEAT TRACK
4	D3811-3	BUSHING
2	MS21042L3	NUT
2	MS27039-1-15	SCREW

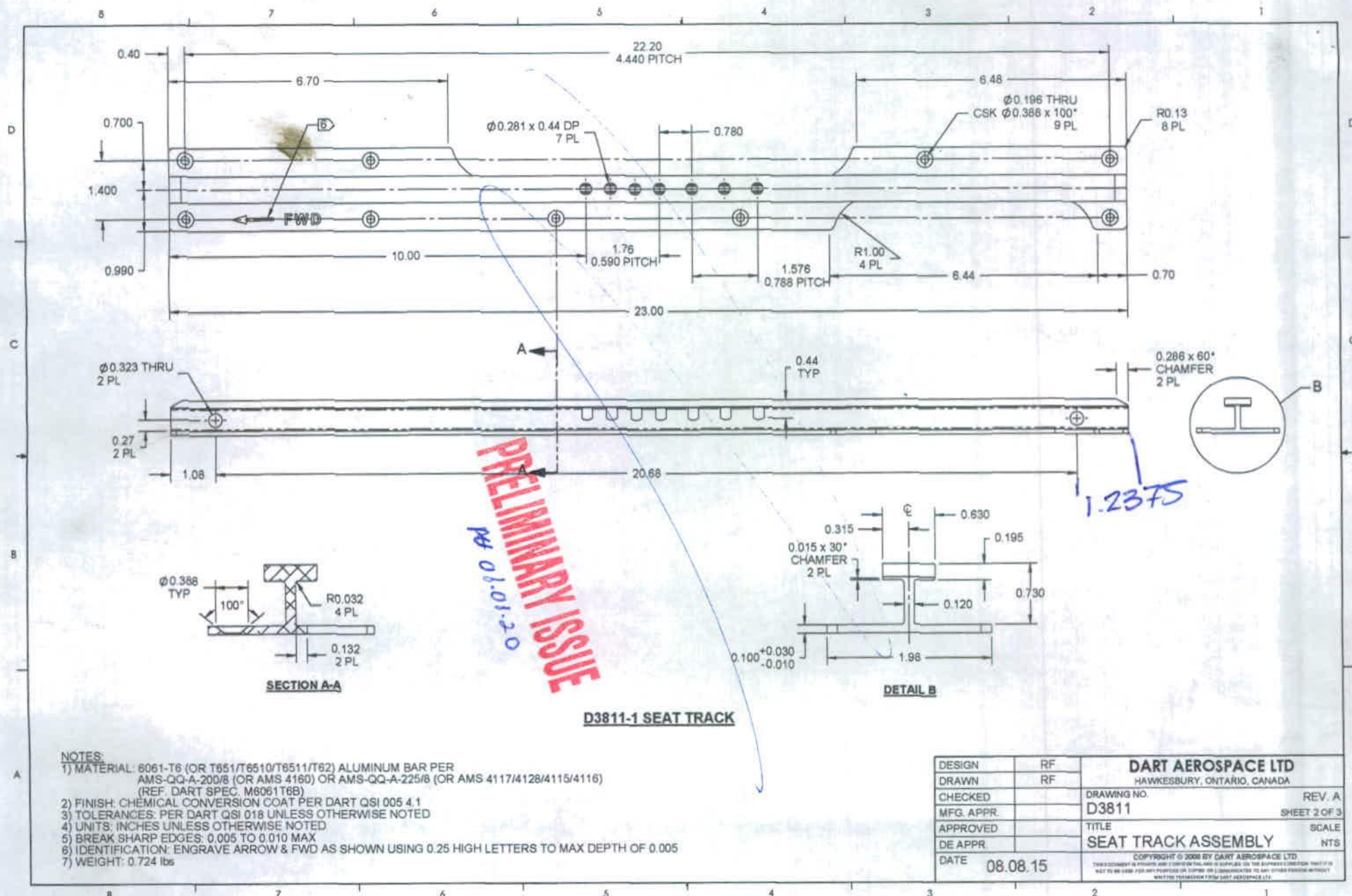


D3811-041 SEAT TRACK ASSEMBLY

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3811-041 & B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.78 lbs
- 8) TORQUE FASTENERS TO 20-25 in-lbs

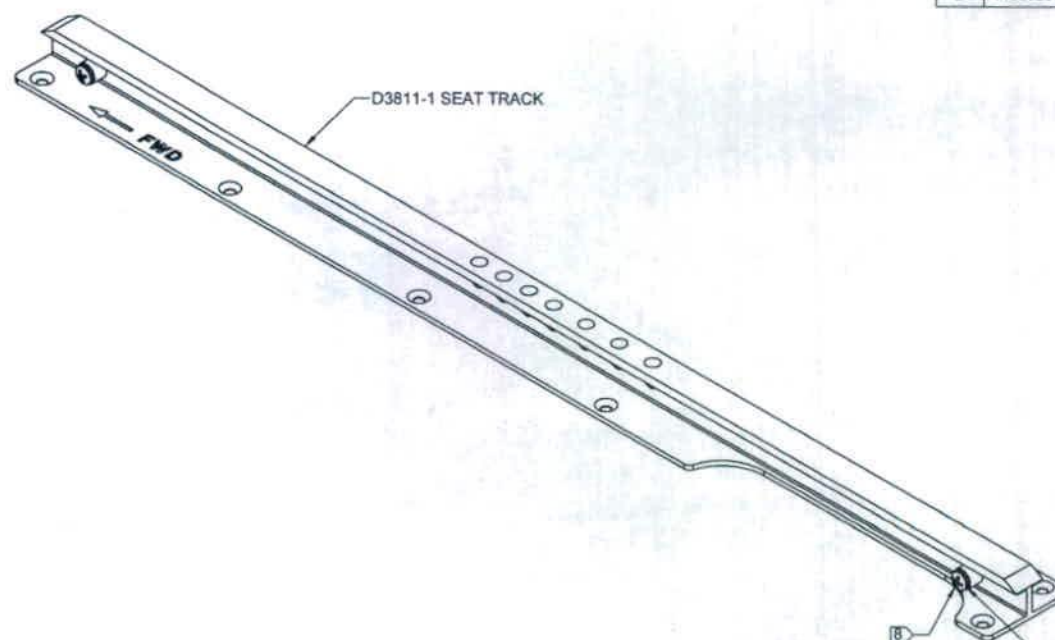
REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	RF	08.08.11
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3811	SHEET 1 OF 3
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CHECKED			
MFG. APPR.			
APPROVED			SCALE
DE APPR.			NITS
DATE	08.08.15		

THE UNIVERSITY OF CHICAGO

QTY -041	P/N	DESCRIPTION
X	D3811-041	SEAT TRACK ASSEMBLY
1	D3811-1	SEAT TRACK
4	D3811-3	BUSHING
2	MS21042L3	NUT
2	MS27039-1-15	SCREW



D3811-041 SEAT TRACK ASSEMBLY

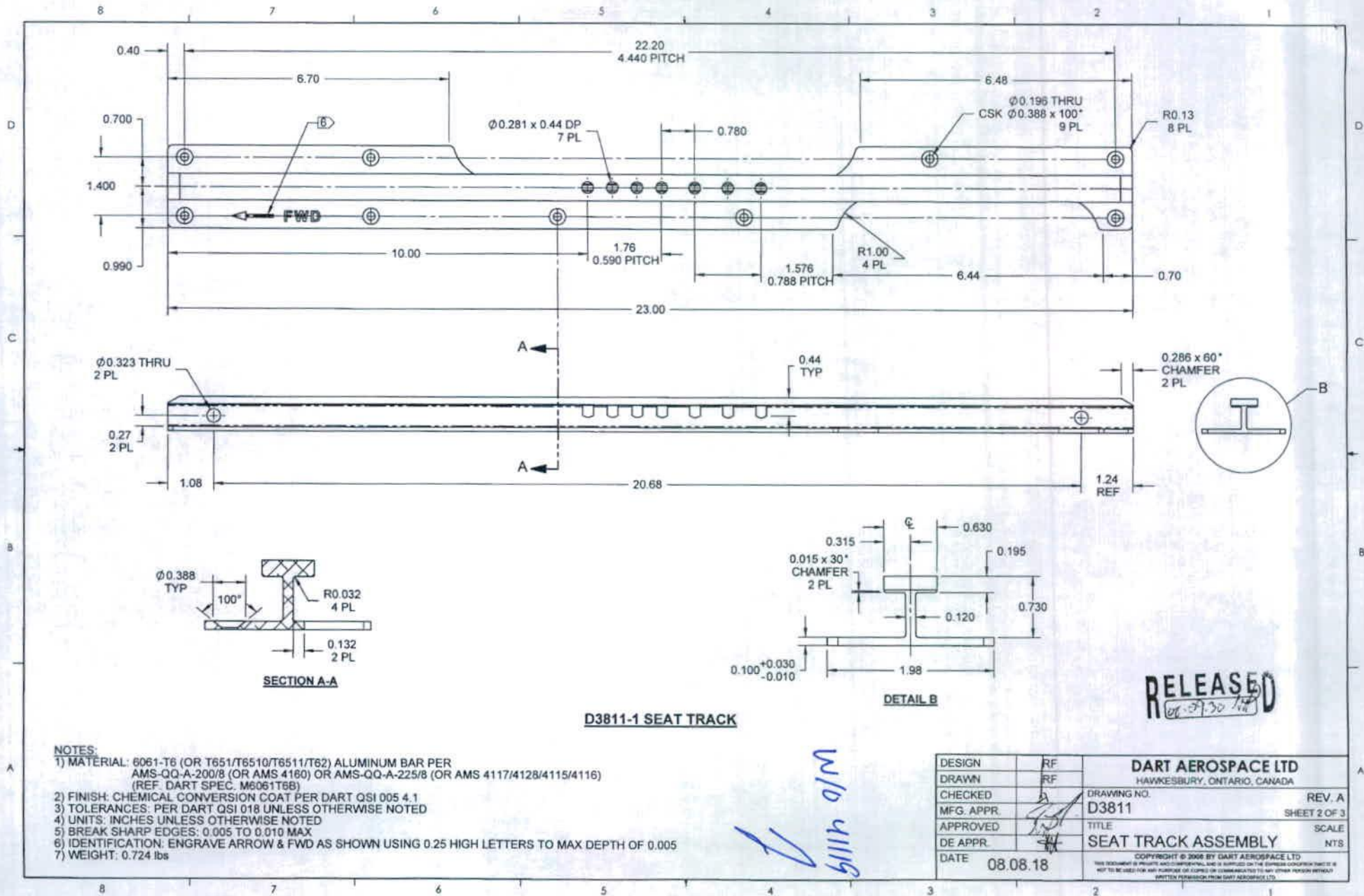
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08-09-18

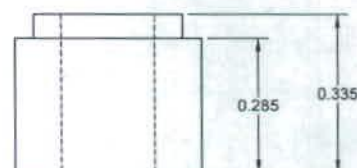
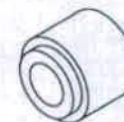
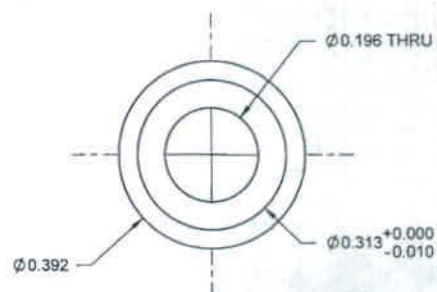
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3811-041 & B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.76 lbs
- 8) TORQUE FASTENERS TO 20-25 in-lbs

A	NEW ISSUE	RF	08.08.18
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
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Handwritten: 61119 01M





D3811-3 BUSHING

NOTES:

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM ROUND BAR PER AMS-QQ-A-200/8 (OR AMS 4160) OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) (DART REF. SPEC. M5061T6R)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.003 lbs

*U/O
4119*

RELEASED
08-09-30/14

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